The transformation of Spanish society 1800-1950: state of the art

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Fausto Dopico

I. The Problem of Statistics

The study of Spanish economic history has improved markedly in the last few decades, as anyone familiar with the limitations and tenuousness of research in this field in the past 50 years will appreciate. For the wealth of information, both qualitative and quantitative, now available about our economic past, we can thank the pioneering works of Ramon Carande, Jaume Vicens Vives and Luis Garcia de Valdeavellano, and contributions of foreign researchers such as E. J. Hamilton and P. Vilar. Nonetheless, there has always been a striking difference in the amount and availability of information about the 19th and 20th centuries as compared to the 16th - 18th centuries; this difference is due both to the different world roles played by Spain in these periods and to the difficulties in obtaining adequate documents about the 19th and 20th centuries.

Though archival documents from the 16th to 18th centuries have attracted the attention of researchers the world over, the documentation of the period 1800 - 1950 is, if not downright scanty, certainly irregular, scattered, unsystematic and often of dubious quality. The vicissitudes of political life and the persistent public debt, combined with corruption and neglect, all contributed to a notorious incapacity of Spanish governments in this period to periodically register, file, maintain and publish adequate statistical series and data about the principal economic activities of the country.

Still and all, the beginnings of what has come to be called the "statistical era" had been very promising in Spain. In the 18th century, the royal government expended considerable effort to determine the number, income and goods of people and institutions. The most spectacular result of this effort, which attempted to establish the basis for a far-ranging fiscal reform, was the publication of the *Castro del Marquês de la Ensenada,* an extraordinarily useful document for demographic and socioeconomic research about the twenty-two registered provinces (which, around the middle of the 18th century, represented 70 % of the Spanish population).

Towards the end of 1786 and the beginning of 1787, the Floridablanca Census was taken. This census, originally done with no fiscal purpose in mind, is extremely good for its time, without doubt the most complete census of that period in Spain. Covering the whole country, it includes age distributions which, if not completely adequate by present-day standards, certainly allow an analysis of its reliability and permit the formulation of important hypotheses about the behavior of the Spanish population at the time.

The wars with England and France, the Napoleonic invasion, the crisis of the Ancien Regime, the Carlist Wars and military insurrections led to a political instability which was evident in the central administration's inability to continue the statistical ordering begun by the Enlightenment Bourbons. During the first half of the 19th century, there was almost no systematic preparation of statistics about the state and evolution of the principal socioeconomic indicators. In 1841, the author of the first Spanish translation of a statistics text wrote, "In Spain (this is something very difficult and shameful to admit) both those who govern and those governed are in the dark about everything from the exact number of the population to the slightest information about our present strengths, resources and production from this rich and privileged earth... This lack of statistics is felt equally in the tributary system and in the fields of agriculture, manufacturing and commerce. The Government obviously wants to protect these latter, but to make available scanty statistical information which is insufficient and inaccurate usually only prejudices, rather than protects, these three main branches of industry." (A.P.F. de Sampaio, 1841). As an example of this dearth of information, what should be a straightforward study of the overall evolution of the population during the first half of the 19th century is severely restricted by the lack of reliable data, since the surveys available are crude reckonings undertaken for administrative and fiscal purposes - a far cry from what can be considered a statistically acceptable census.

In spite of these problems, abundant and varied - though scattered - documentation does exist at local, municipal and provincial levels. These documents have served as the basis for numerous monographs, whose usefulness, because of differing methodologies, does not nearly match the effort required to produce them. This is also true for hundreds of studies on land disentailment (G. Rueda, 1981), in which the same stereotypes and generalizations are repeated over and over again, doubtless because of the absence of well-designed, collective and large-scale surveys.

The situation improved somewhat with the creation, in 1856, of the King's Statistical Commission. In 1857 the first population census designed by an organization dedicated exclusively to statistical studies was done, and shortly thereafter, the first statistical annuals and information on vital statistics (births, deaths and marriages) appeared. These publications were full of errors, inadequacies and breaks in chronology, but little by little, Spain began regulating the gathering and analysis of statistics. There have been regular population censuses and information on vital statistics since the beginning of the present century, and Statistical Annuals have appeared since 1914.

The Spanish Civil War of 1936 - 1939 aggravated the already troublesome problem of statistical documentation. In 1945, in the preamble to the law creating the National Institute of Statistics, the Franco government itself admitted to the backwardness and sorry state of existing statistical services. That

same year the first estimate of national income published by a state body, The Committee on the National Economy, appeared. Derived indirectly from production statistics, it is burdened by conceptual and methodologic deficiencies, as well as by the limited reliability of the sources on which it is based (E. Fuentes, 1969).

In 1950, Spain still had no national accounting (begun only in 1954), nor anything that could remotely be called a census of wealth, agrarian production or industrial production. There was no one official statistical series that could be used to attempt an overall evaluation of a key problem in Spain's economic, social and political history: the structure of land ownership. Until the end of the 1950's, the situation remained frankly unsatisfactory, and only following the statistical restructuring of 1957 did official bodies begin to produce more or less reliable information and to improve both their methods and the reliability of their data.

If we accept the idea of a relationship between the degree of a country's social and economic development and the quality of its statistics, we can hardly wonder at Spain's backward state in this field. In 1950, the real per capita gross domestic income was 22 % that of the United States, 37 % that of Great Britain, 32 % of Belgium's, 45 % of France's, and 79 % of Italy's. Other indicators give us a picture of a country with half its active population dedicated to agriculture, and with an infant mortality rate of about 70 °/oo etc.

The calculation of the principal indicators of wealth and of national economic flow is a constant preoccupation of socioeconomic thought, at least of the "political arithmetic" of the 17th century. Per capita income is certainly inadequate for providing an accurate picture of the development of a country's socioeconomic structures and international position; still, when some sort of indicator is needed, it is undeniably useful for measuring and comparing degrees of development.

In our case, there are serious obstacles in determining the evolution of per capita income. The first estimate of national income, made by Arthur Young (1793), was considered totally untenable by G. Tortella (1983). Even assuming its reliability, difficulties still exist in comparing this estimate to later ones. There are no price series that allow the deflation of macroeconomic indicators from such an early date. It is not simply a technical question (the choosing and weighting of sufficiently significant sets of series), but also a methodological one. If one cannot speak, until well into the 19th century, of an integrated Spanish market, what theoretical sense is there in, and how does one devise, a representative series of prices for the Spanish economy as a whole?

Given the difficulties for direct calculation of the national income, especially during the last century, Tortella (1983) proposed a very useful series (G. Tortella, 1974; F. Bustelo and G. Tortella, 1976). Tortella assumes the existence during the last century, Tortella (1983) proposed an approximation based on money supply data, about he has provided a very useful series (G. Tortella,

1974; F. Bustelo and G. Tortella, 1976). Tortella assumes the existence of a remarkable stability in the evolution of income velocity, which is confirmed, in his opinion, by the Spanish data. While the proposal -already tried in other countries- is interesting, it cannot blind us to the statistical difficulties inherent in its application. Also, monetary series are subject to error, especially because of the incomplete accounting of banking deposits. Further, there is the problem of the direction of the relationship between money supply and money income, with the convenience of using delayed variables in one direction or the other. And finally, there is the basic theoretical discussion about the assumed stability of money demand (N. Kaldor, 1982).

Lacking more reliable data, researchers have availed themselves of M. G. Mulhall's estimates for a number of years of the past century. Tortella feels that Mulhall's numbers, duly corrected by L. Prados (1982), are provisionally acceptable, given their agreement with money supply data and their dovetailing with J. Alcaide's national income series (1976). Still, these series are not sufficiently consistent to verify each other's accuracy.

In any case, given that this is a formative period marked by internal market consolidation, one would expect, as a consequence of increasing monetarization of the economy, a continued decline in income velocity. Such a trend is not seen in the last third of the nineteenth and first years of the twentieth centuries.

I will return in some detail to Alcaide's estimates later. Mulhall's, because of his rudimentary method and the limitations of his sectorial data, cannot provide an adequate basis for staging and evaluating the rhythms of growth of the Spanish economy.

For the period 1900 - 1936, various estimates exist for particular years; undertaken privately, they are meticulously done, but the results are debatable and their utility questionable. Subsequently, the Consejo de Economia Nacional (CEN, or National Economic Council) produced an historical series going back to 1906. Its methodological errors are considerable (J. Velarde, 1973; P. Schwartz, 1977) and its use for the period in question is therefore highly questionable. J. Alcaide (1976) has reviewed the CEN's calculation of the national income, correcting some of the most obvious errors, but he does not adequately explain serious problems which remain with the methodology used for the new estimate. In addition, inadequacies of the primary statistics used as the basis for the indices are becoming evident as they are compared with present research on production in the different economic sectors.

Economic historians have spent a great deal of effort explaining the historical bases of economic development - or underdevelopment. Placing a country in its international context, and determining the stages of transformation of its social and economic structures, is difficult when there is no handy indicator with which to measure per capita production, per capita income or work productivity. It is for this reason that I have emphasized the deficiencies in Spanish statistics and the limitations of the commonly employed macroeconomic indicators.

We should not wonder, then, at the *a priori* and ideological positions which plague explanations of Spain's relative backwardness compared to western European development. In the last few years, however, our knowledge of basic aspects of Spanish society in the last two hundred years has improved considerably, and many unfounded stereotypes are giving way to more substantial hypotheses.

II. Demographic Transition

One would think, given the existence of a few general censuses for the end of the eighteenth century (1787 and 1797) and the progressive regularization of census and vital statistics publications in the second half of the nineteenth century, that the evolution of the Spanish population from 1800 to 1950 would be fairly well characterized: researchers should have been able to discern the principal characteristics of Spain's demographic transition with no more than the usual problems.

In 1968, Massimo Livi Bacci, attracted by the wealth of demographic data for the end of the eighteenth century, undertook a study of the evolution of the population during the eighteenth century and of demographic variables, especially marriage and fertility, from the end of the eighteenth to the beginning of the twentieth century. The force and influence of Livi Bacci's personality in Spain, his pioneering use of careful methodology based on the theory of stable populations and on Princeton's life tables, as well as the unquestionable quality of the study itself, were factors which discouraged, rather than encouraged, greater clarification about the transition in fertility during these years; thus, some of his main conclusions have still to receive a proper analysis.

Livi Bacci, noting a constant age structure in the Aranda (1768), Floridablanca (1787) and Godoy (1797) censuses, concluded that the Spanish population was growing at an annual cumulative rate of about 0.43 %. Based on this, he proposed a series of estimates for mortality and marital fertility which he compared with data from the second half of the nineteenth century and the first years of the twentieth.

Analyses of the censuses of the second half of the eighteenth century using similarity indices show considerable constancy in age structure. One is led to the conclusion, then, that there was a partially stable population and that therefore the stable population model with regard to fertility, mortality and population growth could be applied here.

A careful study of the Aranda, Floridablanca and Godoy censuses, however, reveals a systematic bias in their age composition, so that they do not accurately reflect the population distribution of the actual population. The main problem is an underestimation of the number of girls in the first years of life. The annual growth rate (the other parameter necessary to select the appropriate table) is also of doubtful value, as it has been calculated assuming the same degree of

hidden population for the 1768 and 1797 censuses -a risky assumption, since the two were taken using different criteria.

The distortions are even more important when we analyze the situation by regions, since the methodology employed when one assumes a homogeneous mortality throughout the country tends to overestimate fertility in areas of relatively low mortality, and vice versa. Work in progress shows that these distortions can be significant and that therefore some of Livi Bacci's main conclusions must be critically examined with this in mind. An example is his conclusion that there was a substantial decline in marital fertility between 1787 and 1860. This would require us to accept the idea that birth control was widely used throughout the country at the time. Armand Saez (1979) studied the generations of 1871 - 1875, whose fertile period was between 1886 and 1920. The completed fertility rate for these generations is 4.58, comparable to that of Finnish and Italian women and higher than that found in other western European countries, with the exception of Portugal. This indicates that Spaniards were not among the first to adopt family planning, as there is much evidence that the decline in fertility before 1900 was moderate, and limited principally to Catalunya, the Baleares and Madrid.

Figures for the country as a whole conceal the existence of different regional demographic behavior with regard to marriage, fertility and mortality. R. Rowland (1985) believes there are probably two different marriage patterns, extending into Portugal and divided by a line extending approximately from the western Pyrenees to Lisbon. To the north and west of this line, women traditionally married later, and their average age at marriage was about the same as that of women from the northwest of Europe. To the south and east of the line, marriage took place earlier. The factors which explain these two different patterns lie essentially in the different underlying family structures, in inheritance patterns and in the structure of authority within the home. Though these are factors which tend to be quite stable, the influence of migratory movements grew increasingly until, in the twentieth century, traditional patterns were replaced by newer ones.

Different demographic patterns, different patterns of landholdings and different patterns of land inheritance led in turn to different regional patterns of socioeconomic evolution. Thus, in some parts of the north and northwest, the intensification of some factors which limited marriage possibilities and the existence of a structured emigration within the system itself acting as a safety valve, served as moderating forces in the unraveling of traditional society and encouraged a process of "growth without modernization" (M. X. Rodriguez Galdo, 1985). In the south and central parts of the country, the consequences of the unraveling of the traditional agrarian system and of population growth were more explosive, with the demands of the common people for agrarian reform - demands which were very difficult to accede to without profound changes in

the system - becoming extremely intense and occasionally desperate.

Both the demographic transition process and migratory movements explain the change in the size of the Spanish population from the end of the eighteenth century to 1950 (Table III). As with many other European countries, Spain showed a negative migratory balance up to 1950. Emigration was moderate, though considerable, in some regions (F. Dopico and M. X. Rodriguez Galdo, 1981; J. Hernandez Garcia, 1977) in the first half of the nineteenth century, increased in the second half (J. Nadal, 1984; V. Perez Moreda, 1984) and became particularly significant in the first decades of the twentieth century (A. Garcia Barbancho, 1967). Internal and external migrations, closely related to the ups and downs of the industrialization and urbanization processes and to the international economic situation, caused striking regional differences which intensified after 1950.

III. Agrarian "Backwardness"

It has been said that the state of agricultural development at the beginning of this century was so poor, and production and consumption so meager that agricultural growth in the nineteenth century must have been restricted to the minimum needed to keep up with population growth. There is certainly evidence to support this assertion, the clearest being the high percentage of the total active population dedicated to the primary sector: in 1910 this was more than 70 % (Table IV). Such an overwhelming percentage would prove too big a burden for any consolidated process of economic modernization.

The hypothesis of an "agriculture rooted in the past, changing hardly at all in 100 years" (R. Tamames, 1973) was, until very recently, believed valid also for the first third of the twentieth century. The only exception to this was the recognition given to the dynamism of exporting agriculture of the eastern coastal region (R. Perpiñá, 1952).

With such a perspective, it is hardly surprising that agrarian stagnation should be seen as one of the principal causes of Spain's backwardness. Agriculture could not possibly have fulfilled the functions normally assigned to it in the industrializing process: the freeing of manpower, the production of cheap food, the creation of a demand for industrial products, the accumulation of capital which could be poured into other sectors, etc.

All these aspects need to be examined more closely, however. In the first place, Spanish agriculture should not be thought of as homogeneous, and less still can its evolution be compared to that of large-scale agriculture, as occasionally is done in texts and review articles. In Spain, family agriculture constitutes the structure of much agrarian life, even in those areas traditionally considered more "latifundistas" (agriculture of large estates), such as Andalusia. In the second place, the image of a rigid, unresponsive agriculture is far from accurate for the nineteenth and twentieth century.

The nineteenth century was a period of fundamental changes in agrarian ownership and production. The writings of enlightened and liberal thinkers, calling for the dismantling of the "obstacles" that hindered agrarian development, were not merely an ideological reflection of the progressive thinking of the time. The conversion of feudal land to private land; the disentailment of ecclesiastical and municipal properties; the abolition of entailed estates; the banning of a series of privileges and servitudes, were all of such magnitude that they could not possibly have left the agrarian structure untouched, no matter how much the bourgeois revolution in Spain respected the nobility's land rights and no matter how often the nobility was favored - which it sometimes was.

The cultivation of lands that had previously lain fallow, made easier by the disentailment of ecclesiastical and communal goods, was a constant throughout a good part of the nineteenth century. The traditional and generally accepted view sees in this increase in cultivable land the key to the increase in production, which reached its height in the middle of the century. This kind of process always carries with it the danger of the use of marginal lands. There came a point, which G. Tortella (1984) puts around 1850, when yield from land worked and productivity of the work force began to decrease. According to the traditional view, the agricultural decline was the triggering factor for the food crises of 1856 - 57 and 1868, and led to a particularly delicate situation in the 1880's, when the European agrarian crisis became evident in Spain.

The thesis that agricultural backwardness was the fundamental, or at least a very important, factor in industrial development is coherent and convincing, and may be at least partially true, at least for big-scale grain agriculture. However, there are no production and productivity statistics which might back up this thesis for agriculture more generally. Furthermore, it is much too simple an explanation for something as complex as Spanish agriculture.

In those areas where small scale agriculture predominated, the sowing of new land was important, but insufficient, to cover new rural needs arising from population growth and increased monetarization of the economy. The decrease in fallow land, the introduction of new crops, the intensification of land use, the increased use of stables to house livestock, the ordering of the rotating crop system, and the selective reorientation of lands, were all important factors in the Basque, Cantabrian, Asturian and Galician countryside in the nineteenth century.

The dynamism of agriculture on the Mediterranean coast during the second half of the nineteenth century is generally recognized. Even such authors as E. Temime, A. Broder and G. Chastagnaret (1982), who paint a picture of a particularly stagnant Spanish agriculture at the time, admit that small and medium scale farms, which centered principally on the increase in production and profit from oranges and other horticultural products, progressed notably.

Nor is it accurate to talk of agriculture in the south and in Castile as semiparalyzed during this time (A. M. Bernal, 1984; A. Garcia Sanz and J. Sanz, 1984). And the country's important vineyards showed admirable flexibility, increasing production significantly when external circumstances - the spread of phylloxera in France - opened the way for a remarkable increase in exports (L. Prados, 1982).

Though the end-of-the-century agricultural crisis arrived somewhat later in Spain, it hit hard (R. Garrabou, 1975). The important agrarian landowners and entrepreneurs now supported protectionist policies, thus uniting them with Basque and Catalan industrial interests and making possible that phase of Spanish economic evolution which has been called the "nationalist road of Spanish capitalism" (J. Muñoz, S. Roldan, A. Serrano, 1978).

Protectionism was not the only response to the crisis. In the first part of the twentieth century the sowing of new lands continued, especially in regions where "latifundista" agriculture predominated. Most important, however, were the changes in crop structure and the introduction of industrial input.

Tables V and VI summarize some of the changes in the crop system during these years, such a reorientation to those goods more easily commercialized within the country, or for which there was some foreign demand (oil, citric products, nuts and dried fruits, beets). The increase in the production of potatoes is testimony to the intensification of crops in regions in which they were grown. The significant growth in the value of livestock products was due basically to better quality animals and some specialization in cattle in the north.

Those factors which from a technological point of view define an agrarian modernization process (use of artificial fertilizer, mechanization, species selection, sanitary improvement, etc.) were barely in evidence at the end of the nineteenth century. The situation changed substantially in the following decades, as is shown by the use of mineral nutrients: in 1907, 5.2 kg. of inorganic nutrients ($N + P_2O_5 + K_2O$) per sownhectar were used; in 1930 this had increased to 17.6 kg per hectar. Although total overall use remained modest in comparison to more advanced European agriculture, this represents a considerable increase.

If we use advanced European agriculture as the reference point, then acquisition of machinery and metal equipment was modest, but if we take into account the state of Spanish agriculture at the time, it was substantial: by 1932 Spain had one harvester or mowing machine per 84 hectars sown, one threshing machine for every 1544 hectars and one traction engine for every 4820 cultivated hectars.

The value of the total agrarian product grew at a rate of 1.4 % between 1900 and 1931. Production per active male population increased in the same period by a rate of 1.8 %.

From 1910 on, increase in productivity was favored by a significant rural exodus and by the mechanization process. Agriculture more than fulfilled its function as a supplier of a work force to other sectors, to the point that not everyone could be absorbed and many had to emigrate, especially to Latin America.

The increase in production, the acquisition of equipment and the low agricultural salaries lead us to assume there was a certain ability to accumulate capital on the part of proprietors and entrepreneurs. Buying land was considered a good "investment", and the price of land tended to rise not only where small scale agriculture was the norm, but also in the south of the country.

The liberal agricultural policy caused a considerable increase in the number of hired hands in the countryside during the nineteenth century. Seasonal unemployment and low wages, however, limited to an enormous extent the acquisition of consumption goods. The response to the demand for production goods, on the other hand, had to be met by imports as well as by national production. And in some areas of family agriculture the percentages of selfconsumption and replacement as a means of production remained high.

Agriculture only partially fulfilled those functions normally expected of it in the industrialization process, and did not help reduce industrial costs in this period, probably because of the strong protectionism which prevailed at the time. Nonetheless, it is hardly the "guilty party" that traditional historiography makes it out to be. Precisely because economic growth is the result of a series of complex forces which influence and interconnect with each other, agriculture was, in general terms, also part of the slowness (in comparison to more advanced western European countries) of the modernization process in Spain.

One thing, however, is particularly difficult to evaluate adequately in quantitative terms: the social price of the growth model ultimately chosen. The "agrarian problem" was one of the great unsettled questions inherited by the Second Republic. The conflict became extremely accentuated in regions of large estates, where laborers demanded wide-ranging reforms which would give them control of the lands they worked. This was the focus of some of the greatest tensions in Spanish society in the years before the Civil War, and undoubtedly contributed to its outbreak.

IV. Characteristics of the Industrialization Process

Ten years ago Jordi Nadal published *El fracaso de la Revolucion Industrial en España, 1814 - 1913,* refining and completing his contribution to *The Fontana Economic History of Europe.* The book is an interpretative synthesis of the evolution of Spanish society in the hundred years between 1814 and 1913, and is backed up by the author's own abundant research and impressive erudition. Even today, Nadal's own critics are obliged to refer continually to his hypothesis and data and admit that his lines of argument, or at least many of them, are

still the axis around which the continuing discussion about Spanish industrialization before the First World War rotates.

Since then, numerous monographic works have appeared about the industrialization process, especially in regard to the analysis of the principal industrial sectors, the role of banking, the role of foreign business, the conduct of political and economic authorities and the unique situations of the different regional economies. Nadal himself recently published a review of these studies (1984). I will limit myself here to an analysis of those few which are of special interest because of their contribution to our knowledge of the evolution of industrial production, because of their statistical methods or because of the polemical character of their conclusions.

Nadal believes that the Spanish case "is less that of the 'late joiner' than that of an attempt, mostly aborted, to be one of the 'first comers'." But the fact that during the nineteenth century the difference between Spain and other European countries grew does not mean that the point from which each started was the same. Most authors of the Enlightenment and a great number of rulers were conscious of Spain's backwardness in comparison to countries such as Great Britain, France or Holland, and more than once tried to discover in these countries' evolution the magic formula which would overcome it. Few of them, despite their patriotism, would have accepted I. Berend's and G. Ranki's statement, "At the beginning of the nineteenth century, Spain was one of the wealthier countries of Europe." (1982).

Spanish society of late feudalism was not, however, incompatible with the development of some industrial production, in spite of the very grave treasury problems, the extremely unequal distribution of wealth and the lack of an integrated "national" market. In addition to a series of initiatives in manufacturing and rural industry, there were some singular attempts to adopt the most advanced technology of the time: for example, as in experiments in the Andalusian iron and steel industry and in the industrial nucleus of Sargadelos in Galicia.

The most notable industrial development during these years was, beyond any doubt, that of Catalunya. Pierre Vilar (1964 - 1968) has studied the specialization process of Catalunyan agriculture in the eighteenth century, the increase in production and exportation of wine and "aguardiente" and the expansion of Catalunya's internal market. Both agricultural changes and the increase in monetarization of the economy, in a region with a certain industrial and commercial tradition and a fairer distribution of income than that seen in the rest of Spain (J. Maluquer de Motes, 1984), made it possible for the cotton industry to serve as the foundation for the development of a significant industrialization. The cotton industry became more and more mechanized during the 1800's, and toward the middle of the century was holding its own quite nicely (J. Nadal, 1975; J. Maluquer de Motes, 1976). The Catalan textile industry successfully took advantage of the possibilities offered by the West Indies (until the loss of

the last remaining colonies in 1898), the slow increase of internal textile consumption and the increasing substitution of wool and linen by cotton. In 1890, the consumption of textiles was 3.3 kg per inhabitant; of this, more than 80 % was cotton (N. Sanchez-Albornoz, 1981).

Though at the end of the nineteenth century the Catalan industrial structure was centered on textile production, the repatriation of capital from the West Indies, the development of the internal market and an important urbanizing process led to significant diversification in the first decades of the twentieth century. An indication of this growing dynamism is Catalan energy consumption, which in 1933 rose to 1035 kg equivalents of coal per inhabitant, or about 2.3 times the national average.

In the second third of the nineteenth century, various circumstances -agricultural expansion, mechanization of the cotton industry, renovation of the navy, the first stage of railway construction- increased the demand for iron and steel products. Still, production was unable to respond adequately, mainly because of the duty free status declared in 1855 for construction materials necessary for the building and initial functioning of the railroad. Nadal believes this policy was a serious obstacle for the consolidation of the iron and steel industry. A. Gomez Mendoza (1982) disagrees, and maintains the industry would not have been able to increase its capacity to meet demand, that costs would have increased and, when construction declined, the industry would have found itself with an excess capacity.

There were other factors limiting increased availability of iron and steel products, particularly the difficulties in obtaining quality coal. This was a principal factor in the decline of the Andalusian iron and steel industry, which had been predominant until the beginning of the 1860's (J. Nadal, 1975; C. Garcia Montoro, 1978). Asturias, which produced more than half of Spain's coal, took over in the following years, but its coal was inferior in quality and expensive to convert to coke.

Around Bilbao there were mines of iron ore which, because they were easily exploited and because the ore had a very low proportion of phosphorus, were well suited to the Bessemer method. Between 1878 and 1900, 58 million tons of ore were exported to Great Britain (M. Flinn, 1955; M. Gonzalez Portilla, 1981). A substantial part of the profits from these exports remained in Basque hands, contributing significantly to development of the iron and steel industry, to naval construction, to the rise of the hydroelectric industry, to the chemical and paper industry and to growth in the insurance and banking sectors (E. Fernandez de Pinedo, 1983). The momentum of the Basque iron and steel industry -which, benefitting from protectionist laws would soon supply a considerable proportion of the national demand- was futher aided by being able to import English coal on the same boats that sent iron ore to England.

Catalunya and the Basque country were clearly the stars in Spanish industrial development during this period. Their long tradition of business and industry and their comparative advantages allowed them to make the most of the formation and consolidation of the national market. The limits of this market, however, restricted the possibilities of their main productive sectors, while at the same time restricting initiatives arising in other parts of the country. In some cases, other regions suffered deindustrialization and the substitution of their traditional products by those of the more industrialized areas. Thus, heavy regional concentration (in particular, Catalunya and the Basque country) became a principal characteristic of the Spanish model of industrialization.

Another is the importance of the consumer goods industry, a point made by J. Nadal (1975) in his testing of Hoffman's thesis for Spain.

The complete dominance of the textile and food industries is evident in fiscal statistics for the middle of the nineteenth century (J. Nadal, 1984) and in statistics of industrial production (A. Carreras, 1983). This predominance, which was not surprising at the time, given the minimal development of the secondary sector, later became a structural constant. With the exception of a significant decline in the years of Primo de Rivera's dictatorship, consumer goods and those intermediate goods needed for their production represented about half of all Spanish industrial production. This began to change after the Civil War (Table VII).

During the period between the two world wars, the analysis of price evolution gave rise to considerably increased use of quantitative techniques in historical studies. In Spain, the most sophisticated statistical methods have been used to study agricultural prices and associated topics (the formation of a national market, the development of transportation). These methods generally go no further than traditional econometric methods, with the exception of certain demographic studies (F. Dopico, 1985; R. Rowland, 1985) or regional studies (J. Cruz, 1980; F. Dopico, 1982; X. Cordero and M. X. Rodriguez Galdo, 1981; X. Cordero, F. Dopico and M. X. Rodriquez Galdo, 1984).

Gonzalo Anes' study, *Las crisis agrarias en la Espana moderna* (1970), points up the lack of an integrated Spanish market during the final years of the Ancien Regime. N. Sanchez-Albornoz (1974, 1975, 1981), using correlation matrices and factorial analysis, studied the behavior of agricultural prices from 1856 to 1890, the economic regions defined by these prices, and the movement toward a unified market. The Grupo de Estudios de Historia Rural (1980, 1981) extended this series up to the first years of the present century.

The Box-Jenkins methodology has opened up new possibilities in the analysis of time series. D. Peña and N. Sanchez-Albornoz (1983, 1984) have been pioneers in the application of this type of technique to historical studies, using once again agricultural price series.

In the 1880's Spain achieved a remarkable integration in the grain market, much greater than in previous periods, and the convergence of regional prices continued thereafter. Capitalism's degree of penetration in the economic fabric should not, however, be judged solely by the establishment of a uniform national price. Thus, at the end of the last century there were still certain regions with high levels of self-consumption on their farms.

The improvement of transport does not by itself create a national market, but it does contribute powerfully to its formation and expansion, encourage the division of labor and aid regional specialization. The characteristics of the construction of the Spanish railway network and its significance for the overall economy have been the object of a prolonged debate which continues despite the wealth of research on the subject.

Without denying the advantages the railroad offered, G. Tortella (1975) and J. Nadal (1975) have described negative aspects of its construction, particularly its rate of construction, geographic layout and financing and tariff protection. A Gomez Mendoza undertook a radical re-examination of these various aspects (1982), and whether or not one agrees with the author's ideas and conclusions, *Ferrocarriles y cambio economico en España, 1855 - 1913* is clearly the most rigorous and thorough application of the methods and techniques of the "new economic history" yet offered on a Spanish topic.

The role played by foreign business in Spanish economic evolution is also the subject of some controversy in Spanish historiography. In a book with a suggestive subtitle, "Growth and Underdevelopment", J. Nadal Farreras (1978) points out the subordinate role Spain played in economic and business relationships with Great Britain. L. Prados (1982, 1984), on the other hand, maintains that classical (and neoclassical) arguments in favor of foreign business are applicable to Spain.

Closely related to this is the subject of foreign investment, and it is no less polemical a topic. R. Anes (1970), A. Broder (1976) and M. T. Costa (1983) have studied foreign financing before World War I. From 1855 to 1890 investments were concentrated mainly in railroads and mining, and later diversified (water, electricity, transport, the chemical industry, etc.). While G. Tortella (1981) emphasizes the positive and dynamic aspects of foreign investment, J. Harrison (1980) sees in foreign control of the principal mining companies a symptom of underdevelopment; J. Nadal and Broder insist that a sizeable portion of the money from foreign sales never returned to the country. The characteristics of foreign business and foreign financing in Spain led J. Muñoz, S. Roldan and A. Serrano (1978) to speak of the existence of a "subordinate" model of industrialization in the second half of the last century.

This is not the place to embark on a discussion of the different ways in which the state can participate in the industrialization process. However, J. Harrison's forceful statement attributing most of the backwardness to "a series of govern-

ments bent on a variety of mistaken and counterproductive policies" needs to be qualified and applied to particular cases. Nonetheless, it is certainly true that the Spanish state took a leading role throughout the industrializing process, and not only in the usual ways (establishment of the institutional framework, fiscal policy, monetary policy, taxes, etc.). The effects of monetary policy have recently been studied by P. Martin Aceña (1981, 1984). Fiscal policy was in general regressive and discriminatory, and led to a sizeable and chronic debt (R. Anes and P. Tedde, 1976; J. Fontana, 1977; P. Tedde, 1981, 1984). Foreign trade policy was strongly protective, except for the short period following the Figuerola Tariff of 1869. Some other decisions did decisively influence the evolution of Spanish capitalism: the opening up of the country to foreign investment in 1855, the mining legislation of 1868, the consolidation of protectionism in the tariff of 1891 and its subsequent accentuation, the interventionism and corporativism of Primo de Rivera's dictatorhip (1923 - 1930) and the profound consequences of Franco's autarchic policy after the Civil War. In short, there emerged a framework characterized by protectionism, interventionism and political authoritatianism. Still, This cannot be seen as the effect of decisions by a series of incompetent rulers (which obviously not all of them were), but as the result of complex conditionings and powerful interests and of their reactions when faced with the opposition of the dominated social classes.

V. The Evolution of Industrial Production

A. Carrera's (1983, 1984) careful construction of an annual index of industrial production permits us to estimate a growth rate and to detect certain significant stages.

Although the annual cumulative growth rate of 4.6 % obtained for the period 1831 - 1861 is little more than guesswork, it confirms the considerable industrializing momentum of the mid-1800's which Nadal's book and other works have already made clear. The growth rate was noticeably less in the following years (2.3 % between 1861 and 1890 and 2.0 % between 1890 and 1913), almost as though it were suffering the consequences of the previous growth, although in reality the industrializing process was only just beginning.

Between 1913 and 1916 industrial production grew at an annual rate of 2.9 %. Both energy production and capital goods production continued to grow from 1916 to 1918, thus compensating for the decline in production of consumer goods. There was a modest post-war decline, and then, in 1922, levels once again approached those of 1916 and 1918. Spanish neutrality in the first World War had other consequences: a positive balance of trade (it had traditionally shown a deficit); changes in the industrial structure, including the growing replacement of imported goods by national products, a trend strengthened by increasing protectionism; the substantial rise in business profits; the expansion of the banking sector, etc. (S. Roldan, J. L. Garcia Delgado and J. Muñoz, 1973; J. Fontana and J. Nadal, 1976).

The deterioration of the social and political situation, pressures from powerful economic groups and the conspiracy within the upper echelons of the military, led to the military dictatorship of Primo de Rivera in September 1923. A Carrera's industrial production index shows a 5.5 % per annum increase from 1922 to 1929, completely in step with European growth at that time. J. Velarde (1968) believes the key to economic growth during this period was the growth in public investment - especially the policy of public works - and the numerous effects derived from this growth. This policy has been called pre-Keynesian; even if we accept that judgment, it was a pre-Keynesianism that was imposed by circumstances rather then chosen by economic authorities, who were most decidedly in favor of a balanced budget (A. Melguizo, 1979).

In fact, a considerable portion of industrial growth during the dictatorship came from the production of producer goods (Table VIII). This type of growth has its limits and costs, however, as recent works have shown (J. L. Garcia Delgado, 1983).

The statements of Indalecio Prieto, the first Minister of Finance and later Minister of Public Works in the first years of the Republic, have served as the basis for sometimes merciless criticism of Republican policy. This criticism revolves around the reduction in public investment - already begun in the transition government of Berenguer - and around the failure to draw up an anticyclical policy which would have allowed the government to cope with the international economic crisis. A recent article by F. Comin and P. Martin Aceña (1984) tries to de-mythify the state's role both in the growth of the twenties as well as in the subsequent stagnation. They show that the Republican governments followed neither a monetary nor a restrictive fiscal policy, and that the behaviour of the private sector was decisive in shaping the economic situation.

Between 1929 and 1935, the index of industrial production showed a 0.4 % annual rate of decrease, certainly moderate in the context of the world depression. The Depression affected the different industrial sectors differently. While production of consumer goods, aided by the Republic's wage policy, rose moderately, that of capital goods declined sharply.

Though both the economic and international political context posed a number of difficulties for the Republican governments, limiting their manoeuvrability, their main problems were structural. Hundreds of years of tradition had resulted, in the first third of the twentieth century, in a highly uneven distribution of wealth, property and income, so that the coming to power of a Republican government built up hopes in those on the lower end of the scale for economic and social change. Myriad ideological and political factors served to radicalize the situation increasingly until the outbreak of the Civil War.

VI. Conclusions

Most historians recognize Spain's backwardness in the transition from an agrarian to an industrial society. This backwardness, however, is a function of seeing the country in relation to development in the advanced western countries. Many economic, social and cultural factors hindered a growth which would be both centered in Spain and possessed of sufficient momentum to bring forth a transformation comparable to that of such countries as Great Britain, France or Germany. Nor was Spain in a condition to benefit, as were Belgium, Switzerland and Denmark, from the effects of industrialization in the larger European countries. Their geographic characteristics, business and production structures and links with other countries were all quite different. Still, Spain had sufficient capacity and geographic and economic proximity so that capitalist development was not just the mere creation of enclaves within the country.

If we look at other neighboring countries such as Portugal or the Mediterranean countries, then Spain's backwardness is not so striking. Portugal, which followed a very different growth strategy, had a per capita income in 1950 that was one third less than that of Spain. I have already expressed my skepticism about Spanish estimates for the first decades of this century, but if we accept the validity of P. Bairoch's estimates (1976) for very broad comparisons then we can see that the per capita gross national product at the beginning of the century was similar in Italy and Spain. Though in the first part of the century Italian growth was already somewhat greater and its industrial structure more diversified and competitive (A. Carreras, 1973), the differences became especially marked in the years after the Second World War: Spanish per capita income in 1950 was 79 % of Italy's and in 1960 only 69 % (R. Summers, I. B. Kravis, A. Heston, 1980).

There is little doubt about the economic cost to Spain of the Civil War and the autarchic era of Franco's rule (1939 - 1957).A level of industrial production equivalent to the pre - war level was not reached until 1949 and, according to Alcaide's figures, per capita income did not recoup until 1953. Spain's economic recovery after its Civil War was much slower than that of other European countries after World War II, despite the fact that the latter experienced more extensive destruction of their structures of production than did Spain. A large part of the population suffered the consequences of this, and lived on the edge of poverty for years.

If Spain was strongly protectionist even before 1939, after the Civil War it completely isolated itself from the outside. Import and export restrictions, bilateral clearing agreements and the control of foreign exchange held sway over foreign trade policy; this was combined, within the country, with the state's strict regulation of production processes and international trade, a powerful political presence in the assigning of sources and widespread corruption in the halls of power.

Of course, a variety of international circumstances propelled the first governments of the Franco era to choose an isolationist policy. But this autarchic path upset neither the new rulers nor the classes which supported them, and dovetailed very nicely with the fascist desire for self-sufficiency. In 1939, General Franco declared, "Spain is a privileged country which can take care of itself. We have everything we need to live on, and our production is sufficently abundant to guarantee our own subsistence. We have no need to import anything."

One cannot, however, dispose of the first decades of the Franco regime with a simplified disqualification of its economic policy. They were also years of a significant redistribution of income and accumulation on the part of certain groups and privileged economic sectors. These groups were finally able, after the changes in economic policy from 1957 on, to connect with European expansion and control the powerful industrializing process of the sixties and early seventies. Perhaps the most terrible consequence of the Civil War was not economic, but cultural and political. Spain was for too many years completely - and purposely - closed off from the main trends of European life, thought and culture. The enormous cost of this harsh reality to generations of Spaniards is something no systematic model will ever adequately assess.

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In March 1985 a group of professors from various Spanish universities were kind enough to accept the invitation offered by the University of Santiago to participate in a conference on the topic of this talk. Pablo Martin Aceña spoke about the evolution of the money supply between 1900 and 1935; Domingo Gallego about technical changes in agriculture from the end of the nineteenth century to the Civil War (I am indebted to him for the data I have used on fertilizers and machinery); Francisco Comin about the evolution of the agricultural product between 1891 and 1949; Antonio Miguel Bernal on property and land prices between 1800 and 1950. Maria Xose Rodriguez Galdo spoke about the decline in fertility, and Rafael Anes about coal mining; Carles Sudria summed up the conclusions of a study on the energy sector which he did with J. Nadal, J. Maluquer de Motes and A. Carreras. Xaime Garcia-Lombardero and the other members of the Economic History Department of the University of Santiago also participated. The papers and comments of all were most interesting, and I am only sorry not to be able to acknowledge all of them here. Robert Rowland read the manuscript and offered useful suggestions. To all these colleagues, my heartiest thanks. The focus of the paper, and any errors it may contain, are of course solely my responsibility.

Table I

Completed fertility rate per woman

Generations	Completed fertility rate	Generations	Completed fertility rate
1871 - 75	4.58	1906 - 10	3.05
76 - 80	4.44	11 - 15	2.88
81 - 85	4.32	16 - 20	2.61
86 - 90	4.04	21 - 25	2.48
91 - 95	3.86	26 - 30	2.52
1896 - 1900	3.53	31 - 35	2.66
1901 - 1905	3.25		

Source: A. Saez (1979)

Table II

Life expectancy in Spain

Year	e_o
1900	34.8
1910	41.7
1920	41.1
1930	50.0
1940	50.1
1950	62.1

Source: Instituto Nacional de Estadistica.

Table III

Evolution of the Spanish population

Year	Population (*)	Annual cumulative growth rate
1787	10393	
1860	15645	0.56
1900	18594	0.43
1930	23564	0.79
1950	27977	0.86

Source: Population censuses. Does not include Ceuta, Melilla and previous African possessions.

*) Population in thousands.

Table IV

Sectorial distribution of the active male labor force (%)

	1877	1910	1930	1950
Agriculture	72.2	71.6	50.6	54.3
Industry	13.2	14.5	25.3	25.6
Services	14.6	13.9	24.1	20.1

Source: Population censuses and Instituto de Cultura Hispanica (1957).

Agriculture includes the fishing industry; industry includes mining, manufacturing electricity, gas, water and construction; services is everything else.

The active female labor force is not included because of inadequate data.

Table V

Distribution of the Spanish agricultural product (% of total)

		1900	1931
1.-	Agriculture	77.3	76.9
	Grain	44.7	34.5
	Wine	9.5	6.0
	Olives	5.1	5.7
	Trees and fruit trees	4.3	8.0
	Roots, tubers and bulbs	6.2	11.1
	Specialty crops (textile crops, beets)	2.0	2.9
	Garden crops	3.4	6.0
	Cultivated grazing lands	1.7	2.7
2.-	Forests, pastures and fodder	9.5	4.1
3.-	Livestock	15.4	19.0
		100.0	100.0

Source: Group for Rural Historical Studies (G.E.H.R.), 1983.

Table VI

The value of the Spanish agricultural product in 1931 compared to 1900

		1931/1900 %
1.-	Agriculture	154
	Grains	119
	Wine	98
	Olives	175
	Oranges	342
	Almonds	236
	Potatoes	306
	Sugar beets	583
	Garden crops	254
	Cultivated grazing lands	220
2.-	Forests, pastures, fields	68
3.-	Livestock	223
	Milk	248
	Wool	133
	Meat	217
	Total Production	155

Source: G. E. H. R., 1983, Production has been valued in terms of the 1910 pesetas.

Table VII

Contribution by sector to the Spanish industrial production index (in %)

Year	Sector 1	2	3	4	5
1861	2.7	31.7	7.4	8.2	50.0
1891	6.6	24.2	12.9	8.1	48.2
1913	11.3	19.3	11.4	11.4	46.6
1922	13.0	9.9	9.2	11.9	55.9
1929	14.3	10.4	13.6	20.0	41.7
1935	17.4	6.5	9.7	16.5	49.9
1940	24.3	5.2	11.5	19.1	39.8
1950	27.2	5.9	12.4	18.6	35.9

Source: A. Carreras (1983).

Sector 1 includes energy. Sector 2, mining, does not include minerals used for energy. Sector 3, producers of intermediate goods for equipment goods. Sector 4, producers of investment goods. Sector 5, consumer goods and intermediate products for the production of consumer goods.

Table VIII

Percent of growth of industrial production according to sector (1922 - 1929)

Energy	16.9 %
Mining	11.4 %
Intermediate goods	21.9 %
Investment goods	35.3 %
Consumer goods	14.5 %

Source: Adapted from A. Carreras (1983).

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